NUCLEAR DIVISION NEWS

UNION CARBIDE

A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

Vol. 2 — No. 21

Thursday, December 16, 1971

143264

AFFIRMATIVE ACTION COMMITTEE—A Nuclear Division committee has been named with significant responsibility in the field of affirmative action. The committee, which includes representatives of each major unit at the Oak Ridge and Paducah facilities, will coordinate, plan and monitor progress in the field of placement of minority persons, as well as women. The program will also offer potential for these employees to be promoted to positions of increasing responsibility. The committee was recommended in the "Rouse Report," a detailed study conducted last year on interview with more than 700 Nuclear Division employees.

Affirmative Action Committee Formed To Monitor Fair Employment Practices

Development of a Division-wide committee with significant responsibilities in the field of affirmative action has been announced by Roger F. Hibbs, president of the Nuclear Division.

The committee, which includes representatives of each major unit at Division facilities, will have responsibilities for coordinating, planning, monitoring and reporting progress in affirmative action.

The Division president described the successful affirmative action program as one that results not only in the placement of minority persons and women in jobs, but one that also offers potential for these employees to be promoted to positions of increasing responsibility.

Blake Coordinator

Coordinator of the affirmative action program is Charles A. Blake, Equal Employment Opportunities Coordinator for the Nuclear Division. Installation Coordinators include Al G. Burris, Oak Ridge Gaseous Diffusion Plant; Bob Kernohan, Oak Ridge National Laboratory; Herman G. P. Snyder, Oak Ridge Y-12 Plant; and Joe White, Paducah Gaseous Diffusion Plant.

Establishment of the Division-wide committee was recommended in the "Rouse Report," a detailed study conducted last year by an independent agency, W. M. Rouse & Associates. The study was based on interviews with more than 700 Nuclear Division employees.

Other Tasks

Various aspects of the "Rouse Report" will be discussed in a future issue of **Nuclear Division News.**

In addition to having responsibilities for coordinating, planning, monitoring and reporting progress in affirmative action, the representatives will have other important tasks, Hibbs explained.

Among these responsibilities are:

Communicating the intent and progress of the Affirmative Action Program to employees in their organizations and for providing a feedback system whereby employee opinions are referred upward through the organization.

Making certain that a human relations component is incorporated in all formal and informal training programs in which their employees are involved.

These objectives were discussed by Hibbs at a recent meeting with the Affirmative Action Representatives. He reviewed the recent history of the affirmative action program at the Oak Ridge and Paducah facilities. "We have come a long way in the last few years," he explained. As late as 1966, minority employment at our facilities totaled about four percent. He added that most of the persons were employed in unskilled and service-type jobs.

'Situation Improved'

"The situation today is much improved," he explained. "Minority employment totals more than seven percent with the bulk of these employees in professional categories and technical support-type jobs." He added, however,

(Continued on Page 8)

State of Laboratory Address Set Dec.. 17

ORNL Director Alvin M. Weinberg will present the annul "State of the Laboratory" address Friday, December 17, at 8 p.m. in the Oak Ridge High School auditorium. Immediately following the address, refreshments will be served in the ORHS cafeteria. Union Carbide Corporation's Nuclear Division will be host.

Enrichment Shipments Now Total $3.6 Million

Approximately 60,000 pounds of enriched uranium, valued at more than $3,600,000, was shipped from the Oak Ridge Gaseous Diffusion Plant under the Toll Enrichment Program during November.

The enriched uranium is for use in nuclear reactors located in Michigan, New Jersey and New York.

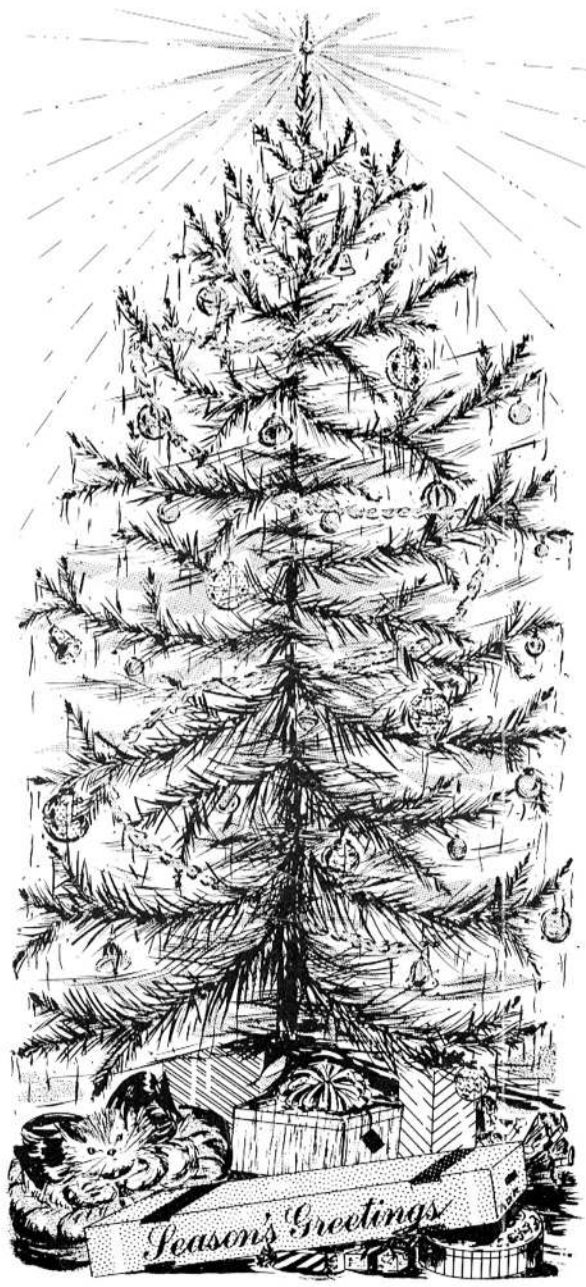
Additional requests for toll enrichment services were received during November from reactor facilities in Alabama, California, Florida and Sweden. These requests call for the future delivery of 179,000 pounds of enriched uranium valued at more than $9,000,000.

Toll enrichment was instituted in 1969. Under this program, privately-licensed owners bring their uranium to a gaseous diffusion plant for enriching on a toll basis. Customers are charged for the services required to separate from natural uranium the desired percentage of uranium-235 isotope, usually between 2 and 3 percent.

THREE HOLIDAYS!

This is a first for the **Nuclear Division News.** For the first time in history, **three** holidays are announced! Thursday and Friday, December 23 and 24, will be observed by Oak Ridge and Paducah employees as days off for Christmas. And December 31, New Year's Eve, will also be taken off. December 31 is being observed in lieu of New Year's Day, which falls on Saturday this time around.

Only those employees whose presence is required for continuous operation or security will be required to be at work on those holidays.



STREET ACADEMY HONORED—F. Perry Wilson receives the Whitney M. Young, Jr., Industrial Memorial Award, presented by the New York Urban League. Union Carbide, cooperating with the Urban League, has been sponsoring a street academy in the Bedford-Stuyvesant section of Brooklyn since 1968. Wilson, chairman of the board of Union Carbide, is seen above with Mrs. Amina Abdur-Rahman, director of the UCC sponsored academy, at Lloyd M. Cooke, corporate director for Urban Affairs.

Industrial Cooperation Utilizes Scientific, Technical Expertise

By Martha Goolsby

Activities have been accelerated in the Nuclear Division's industrial cooperation efforts. Next month will see the preparation of the 1971 annual report and the publication of the Industrial Cooperation (IC) Bulletin. An Industrial Potential Assessment Committee (IPAC) has also been scheduled, all part of the heavy emphasis now being put on industrial cooperation, where Union Carbide can share its scientific and technical skills to industry in general.

The aim of the program is to make maximum use of new developments, results of scientific research and technical expertise from the Nuclear Division. The program is varied. It might involve negotiating contracts, arranging conferences, or deciding to give extra emphasis to dissemination of information concerning a new development. In these instances, the members of the Patent Office or the IPAC may recommend the action to be taken.

Coordinating the program is Mel Koons, Executive Assistant to Nuclear Division President Roger F. Hibbs. Assisting him are IC representatives at each facility. Some installations also have divisional representatives.

Employees or industries may request assistance from the following IC representatives: H. Fritz McDuffie, ORNL, 4500NM, I-106, 3-6777; George Mitchel, Y-12, 9704-2, 3-7143; William E. Rooks, ORGDP, K-1400, Room 372, 3-3515; or Jack E. Gillespie, Paducah Gaseous Diffusion Plant, Building C-710, ext. 631. Also you may contact the Patent Office —at ORNL, Martin Skinner, or at Y-12 and ORGDP, Don Griffin.

The IPAC is unique in that representatives of industry also participate; one person, on a rotating basis, from an Oak Ridge technical industry, and one representative from another division of Union Carbide.

So much for the men—what of the program? Many past activities of industrial cooperation are being continued, but there are additions and some new flourishes.

Continuing programs are:

Conferring. Sometimes written reports do not adequately describe a development. Therefore, a company will wish to arrange formal meetings between its representatives and Nuclear Division staff members. These may take the form of educational sessions, briefings, or even on-the-site training.

Information dispensing. Specialized information centers are available which deal with the whole range of nuclear technology, atomic structures, biochemical ecology, isotopes and many others. Many industry representatives hold library cards for use in the extensive technical libraries maintained at Oak Ridge facilities. Also, many direct requests are made to staff members from industrial researchers in the same fields of work. These requests frequently come from industrial research and development projects.

Consulting. Two types of consulting activities are carried out. In one, a company will request assistance with a particular process or technology for which there is expertise and an ongoing program at Oak Ridge. A staff member is selected as a consultant. In this case the company reimburses Carbide for the employee's expenses and time. It also can be arranged for an employee to consult with another company on his own time and be paid by that company for his services when the consultation is outside the scope of his ongoing project.

Industrial Cooperation Conferences. From time to time, industrial cooperation conferences are held to discuss developments believed to have industrial potential.

Use of facilities and equipment. Many of the unique facilities at Nuclear Division installations can be made available to industry under certain circumstances. Such equipment as reactors, accelerators, analytical chemistry facilities, computers, clean-rooms and complex research equipment is generally provided to industry only if it is not commercially available. In such cases recovery of costs for its use is required.

Report Developments

A major thrust of industrial cooperation activity is in the area of identifying new developments which have potential for industrial adoption. Maximum benefit is derived from new technology only when the technology is effectively communicated. For this reason employees are encouraged to report their new developments or results of research to the Patent Office or to the installation IC representative. New developments and results of scientific research reported to industry always are unclassified, and frequently are nonnuclear developments.

Publication of IC Bulletins is one of the new flourishes. From the many new developments each quarter, a dozen or so with the most industrial potential are selected for a dope-sheet release. The first of these bulletins was released in November to 285 industries. Among the 14 new technological developments reported through this IC Bulletin were a high performance thermal insulation for use in oxidizing atmospheres, an automated orbital pipe welder, graphite bearing surface treatment, bonding of refractory metals, a rotary dissolver, and a subsurface or on-surface irrigation system. Sixty-eight industries responded, a phenomenal 24 percent. The second IC Bulletin will be released January 22.

Business Developed

Also of interest to the industrial cooperation program is the employee who has an idea or through his research develops a product or technology which is nonnuclear and neither Carbide nor the AEC wishes to patent it. But it is of good industrial potential. An example is an Oak Ridge spin-off industry, Chemical Separations, started by a former ORNL staff member, Irwin Higgins. During his research on ion exchange columns in the Chemical Technology Division in the early fifties, he developed a continuous counter-current ion exchange process. Neither Carbide nor the AEC wished to patent the process. Consequently, he filed for his own patent. During this time the Japanese asked for assistance in both the technology and development of their own ion exchange processes. Higgins was granted a leave of absence to help the Japanese. After developing a system for them he set up his own business some 13 years ago. His process is especially useful in the purification of water by removal of acid wastes and other ionic contaminants. Chemical Separations not only conducts tests but also designs and builds equipment for large-scale industrial uses. The company also has built large-scale water purification systems for several U. S. cities.

Among the industrial cooperation programs is a provision for granting an employee a leave of absence for further research and development on a product or process which he has developed which has the potential of much broader scale use than his own research activities. Each case, however, must be determined on an individual basis.

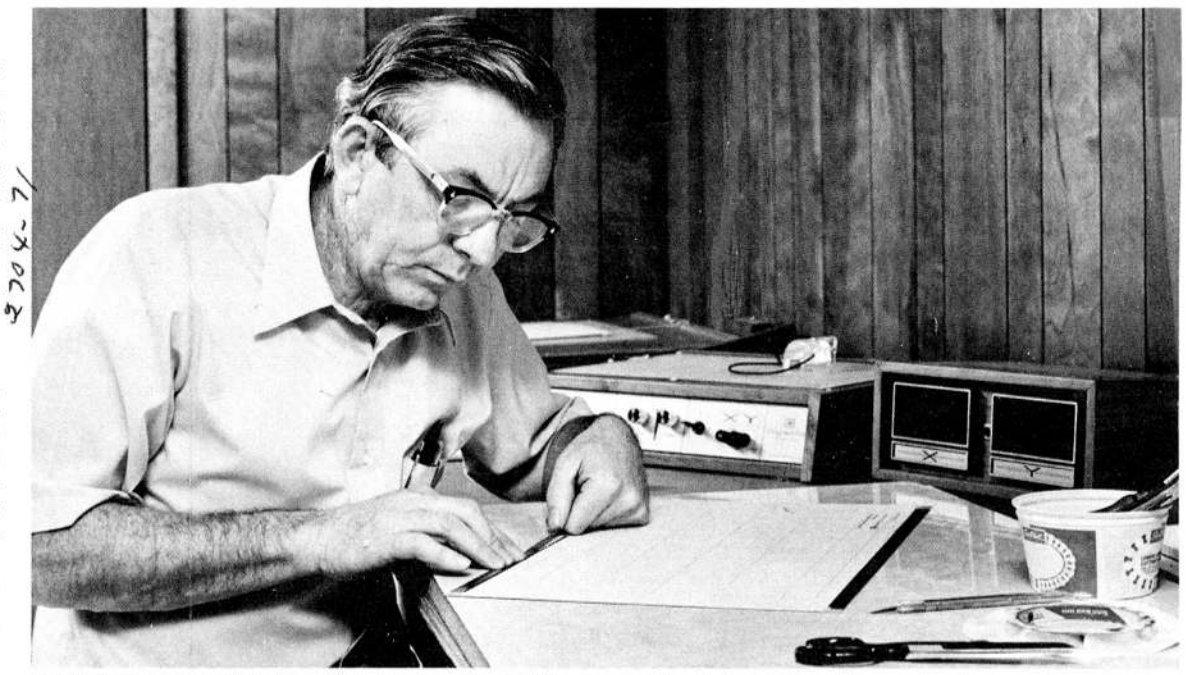
Spin-off industries have tended to center around large research areas. Research areas around Palo Alto, Cal., and Boston, Mass., and to a lesser extent Oak Ridge, have spawned spin-off industries which make major contributions to their local economies and to the national economy.

Research Assistance

Most of these industries are started by research staff members or users of research developments who see a wider potential for them than simply use in the research laboratory. One example is Dave Coffey, a former ORNL Thermonuclear Division staff member. While still an ORNL employee, he began a company, the NUCLEUS, to manufacture radiation detection equipment for use in schools and hospitals. After leaving ORNL he formed a second company, American Magnetics, to produce high performance, superconducting magnets for research.

Another type of industrial en-

(Continued on Page 8)



MAKING A SENSOR—Bill Colwell, ORNL Graphic Arts Supervisor, is the sensor maker which is the most critical component of the Elograph. It is a basement/spare time operation for Bill although his wife Betty is the company's full-time secretary.

STILL INVENTING—Elograph's inventor Sam Hurst is an ORNL Health Physicist. He developed the Elograph while a professor at the University of Kentucky to aid in experimental data. The only instruments available for reverse X-Y plotting were too costly so he developed his own instrument. He is still refining the Elograph and is working on new instruments.

FINISHING THE WIRING—Don Hurst, son of Elograph's inventor Sam Hurst, wires each Elograph in his spare time. He is an honor student at Oak Ridge High School.

NUCLEAR DIVISION NEWS

Published Every 3 Weeks For The Employees Of
UNION CARBIDE CORPORATION
NUCLEAR DIVISION

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4174-1

RECEIVE GOVERNOR'S AWARD—Bill D. Penry, left, and Plant Superintendent Robert A. Winkel recently received certificates of recognition from the Governor of Kentucky, Louie B. Nunn. William B. Moore, of the State Personnel Department, center, makes the awards.

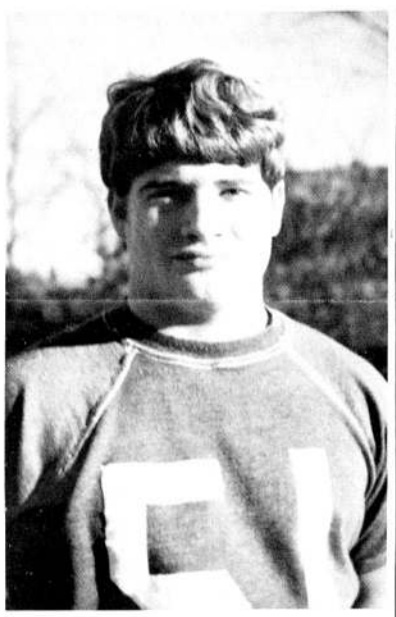
Certificates of Recognition Go to Winkel and Perry Here

Recently Plant Superintendent Robert A. Winkel and Bill D. Penry received certificates of recognition from the governor of Kentucky, Louie B. Nunn.

William B. Moore, of the Kentucky Personnel Department, presented the certificates to Winkel and Penry here at the Paducah Plant.

The awards were in recognition . . . "Of their dedicated service to the Commonwealth of Kentucky in furthering its programs and objectives through the work of the Functional Industrial Program . . . which was first initiated at the Paducah Plant." Operated by Union Carbide Nuclear Division personnel and funded by the U. S. Department of Labor, the Atomic Energy Commission, and the Commonwealth of Kentucky, the program is being used as an example for the statewide organizations of a similar nature.

The Functional Industrial Training (FIT) Program here recently began its second year of operation with the initial training of 15 new recruits.



Mike Breidert

UPI Picks Breidert For All-State Team!

Mike Breidert, son of Mr. and Mrs. Elmer Breidert, along with two other players on the Thilghman Tornado High School football team, was selected on the UPI All-State Team, one of the highest honors a high school player can achieve.

Mike, a junior linebacker, returned from knee surgery in his second year in school to anchor the stingy Tornado defense. A hard tackler, with extremely quick feet, he turned in his best effort against 1970 state champs Madisonville High, making numerous tackles and halting a late Madisonville drive with a kep interception to preserve the win for Tilghman.

Mike is the latest in a long line of employees' sons that have starred on Tilghman's perennial state champion contenders.

DIDN'T IT RAIN?

An inch of rain that falls on one acre of land is equal to 1,375 full bathtubs being drained in a single acre. Converted to snow, one inch of rain is equal to 12 inches of snow.

Busy Holidays

Holiday activities around the Paducah Plant look like everybody is busy. On December 3, the old (?) folks initiated the season with a holiday ball, featuring the Bill Black Combo, followed by the youngsters getting in their licks at the annual Christmas Party at the Arcade Theater featuring the Three Stooges and Ole Santa himself, in that order, on December 11.

Radio spot announcements identifying the plant with safety and holiday greetings will be featured during the hours that employees are on the way to and from work on December 20, 21 and 22. Public service announcements of holiday greetings will be aired during the Channel 6 TV news programs on December 24 and 25.

Headlight Laws Emphasis Are Stressed in Short Days

Nuclear Division motorists in both Kentucky and Tennessee may save themselves a painful injury . . . or a fine . . . or worse . . . by turning their lights on.

Conditions under which headlights are required are 30 minutes before dark, 30 minutes after the sun comes up, and during rain, smoke or fog periods

Highway Patrol officials stated recently that strict enforcement of the state laws is to be observed, particularly during the winter months.

Heart Attack Claims Operations' R. H. Ware

Raymond H. Ware died November 19, from an apparent heart attack. A native of Wylam, Ala., he was employed at the Oak Ridge Gaseous Diffusion Plant in 1945, and transferred to the Paducah Plant in 1951.

Mr. Ware

An employee in the Power and Utilities Department of the Operations Division, Mr. Ware is survived by his wife, Netta; daughters, Mrs. Katherine Snyder, Biloxi, Miss.; Mrs. Betty Kyle, Dover, Fla.; and Mrs. Patricia Holler, Paducah.

Funeral services were held at the Lindsey Funeral Home and interment followed in Maplelawn Cemetery, Paducah.

ATOMIC AGE ACT

The Atomic Energy Commission was established by Congress when it passed the Atomic Energy Act of 1946. The AEC succeeded the Manhattan Engineer District and officially came into existence on January 1, 1947.

Paducah Gaseous Diffusion Plant

Paducah Editor ..... Keith Bryant
extension 369

From a Woman's Viewpoint

By HELEN E. HOUSMAN, R.N.

Years ago, a young lady who chose nursing as a career embarked on a long, tedius and rigid schedule.

Here's a job description of a bedside nurse in an American hospital about 1887:

In addition to caring for 50 patients, each bedside nurse will follow these regulations:

1. Daily sweep and mop the floors of your ward, dusting the furniture and window sills.

2. Maintain an even temperature in your ward by bringing in a scuttle of coal for the day.

3. Light is important to observe the patients' condition. So, each day fill kerosene lamps, clean chimneys, and trim wicks. Wash the windows once a week.

4. Nurses' notes are important in aiding the doctor. Make your pens carefully; you may whittle nibs to your individual taste.

5. Each nurse on duty will report daily at 7 a.m. and leave at 8 p.m., except on the Sabbath, on which day you will be off from 12 noon to 2 p.m.

6. Graduate nurse in good standing with the nursing director will be given an evening off each week for courting purposes, or two evenings a week, if she goes to church regularly.

7. Each nurse should lay aside from each payday a goodly sum of her earnings, so she will not become a burden. For example, if she earns $80 a month, she should set aside $15.

8. Any nurse who smokes, uses liquor in any form, gets her hair done at a beauty shop, or goes to a dance hall, will give the nursing director good reason to suspect her worth, intentions, and integrity.

9. The nurse who performs her labors, serves her patients and doctors faithfully and without fault for five years, will be given an increase by the hospital administration of five cents a day, PROVIDING there are not hospital debts that are outstanding.

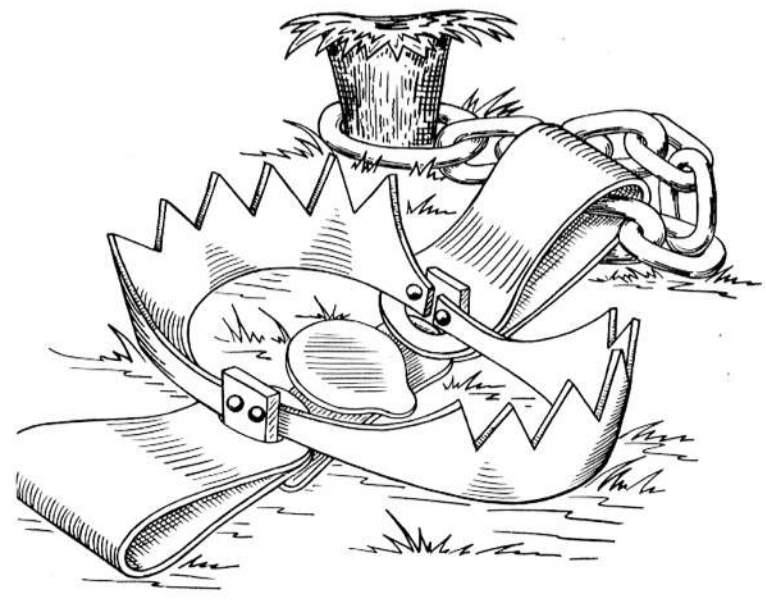
How's that for fair labor practices?

* * *

Dr. J. J. Walsh, who was dean of the Fordham School of Medicine, stated once that "people who laugh often actually live longer." Mary P. Poole, in her "A Glass Eye at the Keyhole," put it this way: "He who laughs, lasts." So, why not try laughing a little more often, and sooner or later you will discover that this has become a natural and characteristic facet of your personality. Remember: He who laughs, lasts!

* * *

Magic Medicine. Over the entrance to Sterling Hall of Graduate Studies at Yale University is inscribed: "He was born with the gift of laughter and a sense that the world was mad."



Avoid Hand Trap!

Oak Ridge Gaseous Diffusion Plant

ORGDP Editor ..... Doug Carter
extension 3-3017

Hughes Named Planner and Estimator; Gibson Promoted to Supervisor Trainee

Millard J. Gibson

Hugo K. Hughes

Two recent appointments in the Oak Ridge Gaseous Diffusion Plant are announced. Hugo K. (Hugh) Hughes has been named a planner and estimator in the Engineering Division; and Millard J. Gibson has been promoted to a supervisor trainee in Maintenance.

Millard J. Gibson, a native of Watauga, same here 26 years ago. Before coming to ORGDP, he worked with the North American Rayon Corporation, Elizabethton.

Mrs. Gibson is the former Grace Hinkle, and the couple lives at 13 Outer Drive, Oak Ridge. They have one daughter, Judy Cochran, a graduate from East Tennessee State University, employed at the Mental Health Center as a social welfare assistant.

Gibson likes to bowl and fish in his spare time.

Hughes

Hugo K. Hughes, a native of Hartselle, Ala., was raised in Oak Ridge. He graduated from Oak Ridge High School and the Tennessee Institute of Electronics. He has been with ORGDP since 1965.

Mrs. Hughes is the former Patricia Solomon, and they have two sons, Kelley and Jimmy, both attending Norris High School.

Hughes lives at Route 1, Clinton, where he and the boys operated a 75-acre cattle farm. He likes to get in some fishing and hunting occasionally.

SAFETY SCOREBOARD

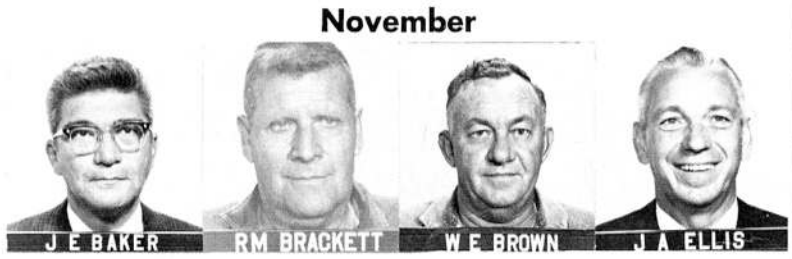
ORGDP
Has Operated
3,003,000 Safe Hours
Through December 9
Since last disabling injury on May 4

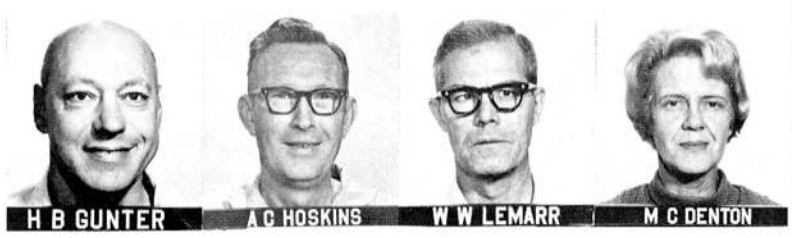
20 Years' Service

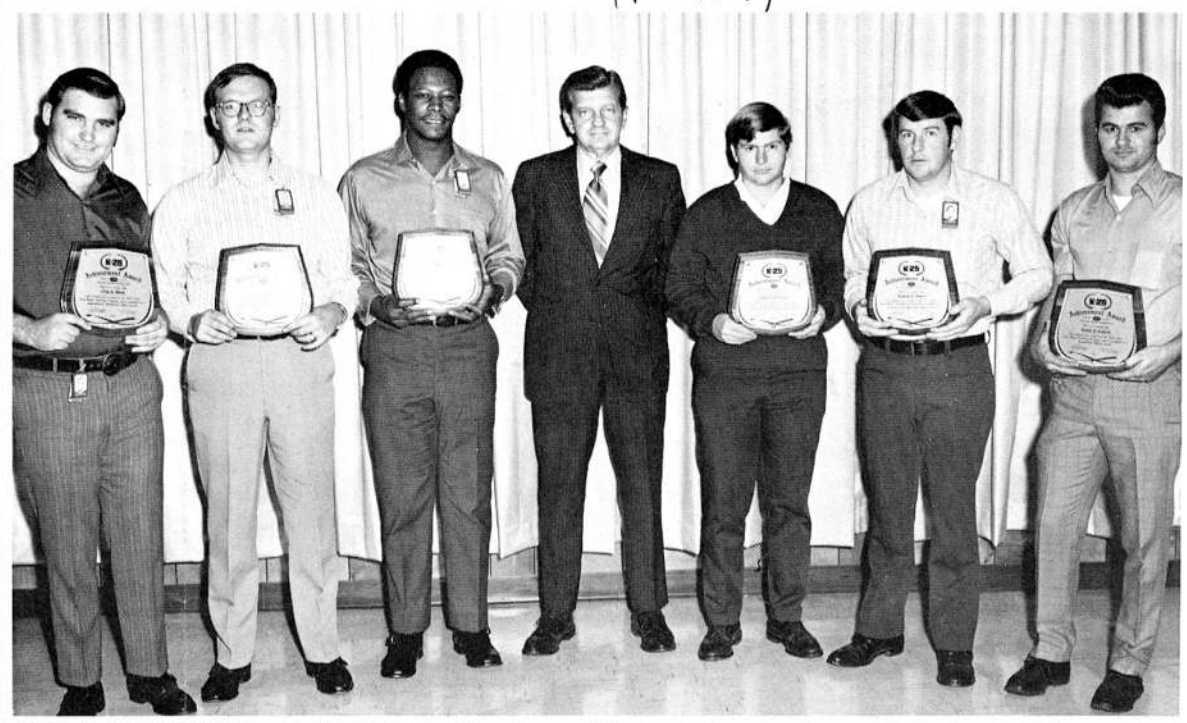
Berris Stepp
Wayne M. Kyte
Newell L. Lane
Virginia M. Brown
Fay B. Smartt
George L. Lowe
Chester E. Brown
James F. Fourman
Cedric S. Patton
Claude B. Smith

25-Year Veterans

November







EARN ACHIEVEMENT AWARDS—Earning achievement awards recently were, left to right, Otis D. Boyd, Ray M. Miller, electrical mechanics; J. L. Williams, maintenance mechanic; Larry A. Studinger, Fabrication and Maintenance Division superintendent, who made the awards; Rush W. Flanagan, Thomas L. Moser, maintenance mechanics; and Ralph N. Luttrell, machinist.

Nine Old-Timers To Enjoy Retirement From ORGDP after Long Plant Careers

Chapman

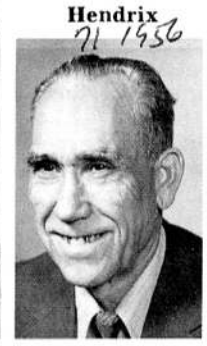
Childs

Hendrix

Huskey

Gamble

Grubb



Leffew

Moore

Nine Oak Ridge Gaseous Diffusion Plant employees will enjoy retirement status come January 1. Retiring are James G. Chapman, Power and Utilities Maintenance; Jessie W. Childs, Chemical Operations Administration Ray M. Gamble, Finance and Materials Division; Walter R. Grubb, SS Material Handling; Noah Hendrix, Cascade Maintenance; Floyd S. Huskey, SS Material Handling; Reuben J. Leffew, Mechanical Services; Paul Moore, Power and Utilities Maintenance; and Lester J. Wayland, Fabrication Shops.

James G. Chapman, a native of Courtland, Miss., lives at Route 4 Crestwood, Kingston. He came to ORGDP September 22, 1944. He and his wife have one son, James G. Chapman, Jr.

Jessie W. Childs was born in Harriman and lives there now at Route 1. He came to ORGDP August 31, 1944. He and Mrs. Childs have 10 children, Margaret Cody, Mary Gober, Jesse W. Childs, Jr., George T. Childs, Marilyn Hatfield, Nora Sue Long, Dorothy Childs, Carolyn Howard, Hazel Childs and Warren A. Childs.

Ray M. Gamble came to ORGDP September 15, 1944. He lives at 115 Wilson Avenue, Clinton. The Gambles have two children, Nancy and Todd. Gamble was born in Maryville.

Walter R. Grubb, a native of Knox County, came to ORGDP August 12, 1944. He lives presently at Route 2, Maryville. The Grubbs have a son Glenn, and daughters, Althea Boruff, Patsy Clemens and Betty Joe Grubb.

Noah Hendrix was born in Carbon Hill, Ala. He came to ORGDP February 23, 1945. The Hendrixes live at 107 Jellico Lane, Oak Ridge. They have one child James R. Hendrix.

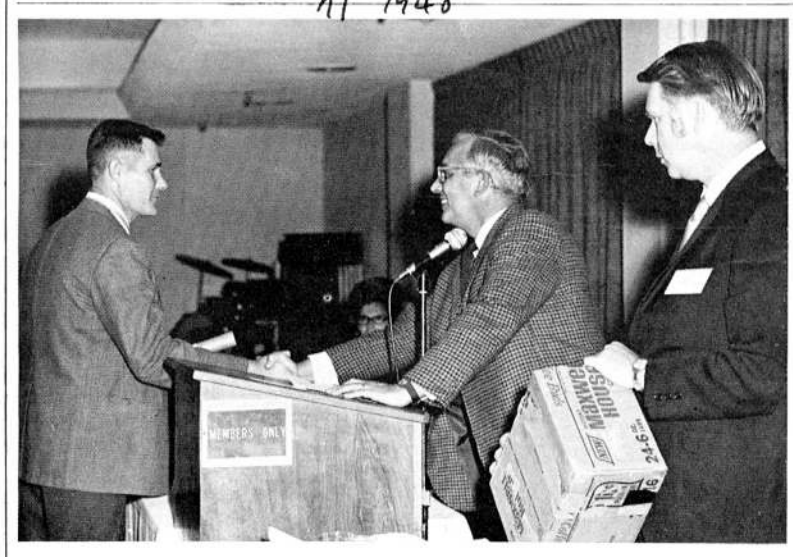
Floyd Huskey, a native of Sevierville, lives at 188 Hillside Road, Oak Ridge, and plans to retire to old family property in the Smoky Mountains. He has two children, Greer Huskey and Yvonne Harrington.

Reuben J. Leffew was born near Rockwood in the small community of Cardiff. He came with Union Carbide July 1, 1944. He lives at 224 Douglas Street, Rockwood. The Leffews have one daughter Janey Honeycutt.

Paul Moore, born in Kingston, came with Union Carbide November 19, 1945. He lives at Route 1, Kingston. The Moores have two daughters, both married, Esther Lancaster, and Laura Reel.

Wayland

Lester J. Wayland was born in Knoxville, and lives there now on Route 12, Burkhart Road. He came with ORGDP May 31, 1945. The Waylands have two children, James and Lou Ann.



RECEIVES CERTIFICATIONS—James F. Crawford, left, receives his Professional Engineering License Certificate from Floyd L. Culler, Jr., director of Engineering at ORNL. Crawford, ORGDP, was one of several Nuclear Division men certified recently and honored at the Oak Ridge Country Club.

Five Vets to Retire From Lab, Jan. 1st

Five ORNL employees will retire effective January 1, 1972. Together they have amassed over 132 years of company service.

Tip Arnwine, who came to ORNL in June of 1946, is a senior lab technician in Reactor Division. He lives at 313 E. Fernhill Lane in Oak Ridge.

Arnwine

Frisbie

John B. Frisbie joined ORNL in April of 1944. He is a maintenance foreman in Instrumentation and Controls Division. His home is at 520 Gila Trail in Knoxville.

Edward J. Greeley, a glass blower supervisor in Plant and Equipment Division, joined ORNL in May of 1946. He resides at 105 N. Tampa Lane in Oak Ridge.

Greeley

Harrill

Charles S. Harrill, who came to ORNL in May of 1943, is a senior research staff member in Instrumentation and Controls Division. He lives on Route 17, Clinch View Lane in Knoxville.

Miss Young

Elizabeth Young, secretary to Analytical Chemistry Director Myron T. Kelley, came to ORNL in February of 1944. She lives at 222 N. Purdue in Oak Ridge.

Congratulations to all these employees.

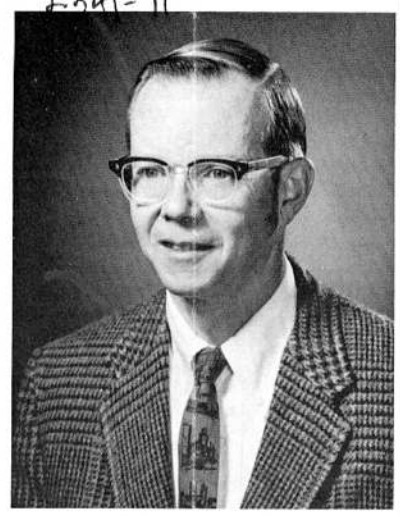
American Physical Society Names Richard L. Becker, Physics, a Fellow

Richard L. Becker has been elected a Fellow of the American Physical Society.

To qualify for APS fellowship a person must have contributed to the advancement of physics by independent, original research, or have rendered some other special service to the cause of physics that has been judged to be equivalent to original research. Becker was nominated particularly for his contributions to nuclear structure theory through his program of critical studies of the Brueckner-Hartee-Fock Method.

Becker has been an ORNL staff member since 1957. He received the B.S. degree from Harvard University and the M.S. and Ph.D. degrees in physics from Yale University. Since coming to ORNL he has participated in research projects in the Nuclear Many-Body Theory at Princeton University and the University of Wisconsin. He serves part-time on the faculty of The University of Tennessee.

He is also a member of the American Mathematical Society. He and his wife and two daughters live at 2780 Turnpike in Oak Ridge.



Richard L. Becker

Company—20-25-30 Service

Employees who are celebrating 20 and 25 years of company service in December are as follows:

25 YEARS

James A. Lane, John C. Martin, Richard E. Mapes, Walter J. Mayott, Glenn M. Way, Robert P. Ward, Harold W. Watson, Charles F. Foust, Woodrow D. Cottrell, Johnnie H. Long, Edward Brodie, Thomas H. Burnett, Charles A. Clark, Truman H. Freeman, Clair J. Collins, Robert L. Sherman.

20 YEARS

Margaret M. Fine, Felix J. Henry, Cyril G. Lawson, Frances W. Hurley, Robert E. Lampton, James E. Strain, Hershel G. Davis, Norman G. Bradley, Edward R. Turnbill, Billie J. Ellenburg, Grover C. Robinson, Jr., Fred E. Richardson, James F. Talley, Byon M. Lamb, David L. Clark, James E. Corum, and Frank G. Kilpatrick.

DIRECTOR OF REGULATIONS—L. Manning Muntzing, new AEC Director of Regulations, recently visited ORNL for briefings with Laboratory officials. Left to right is Deputy Director Floyd L. Culler, James L. Liverman, Associate Director for Environmental Sciences, and Muntzing.

Foster Son Is Recipient Of Pharmacy Scholarship

James R. Foster Jr., son of James R. Foster of Plant and Equipment Division, has been awarded a Health Professions Scholarship. Foster is a senior in the College of Pharmacy of the UT Medical Units in Memphis. This is the second consecutive year he has received this scholarship.

Foster

A resident of Loudon, he has spent his last two summers employed by the Pharmacy of University Hospital in Knoxville as part of his college program.

Graduate Degrees Given to ORNLers

Congratulations to the following who received graduate degrees in recent graduations.

Receiving M.S. degrees from The University of Tennessee were Kenneth R. Carr, Instrumentation and Controls Division, in Electrical Engineering; Peggy Dierlam, MAN Program, in Microbiology; and Mehdi Sohrabi, Health Physics Division, in Physics.

Helen Braunstein, Reactor Chemistry Division, received the Ph.D. degree in Physical Chemistry.

Receiving the Ph.D. degree from The University of Tennessee were Diana Smith, Biology Division, in Zoology; and George D. Kerr, Health Physics Division, in Physics.

Robert P. Rannie, Mathematics Division, received the Ph.D. in Chemical Engineering from Penn State University; and Phillip R. Reed, Chemistry Division, received the Ph.D. in Physical Chemistry from Purdue University.

Ride Wanted

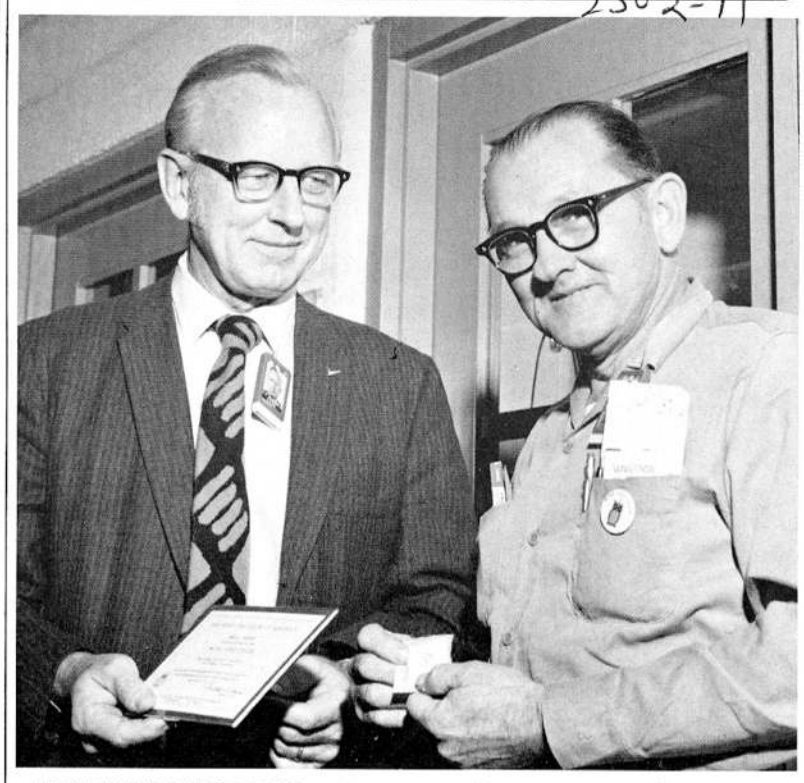
TWO CAR POOL MEMBERS from vicinity of Waddell, West Outer, Pennsylvania, or Utah to East or North Portal, 8:15 a.m. Tom Burnett, 3-6939 or 483-1975.

RIDE from Emoriland Blvd. of Knoxville to Y-12 North Portal, 8:00 a.m. Diane Beeman, 3-7429 or 645-6159.

RIDE from Ball Road in Karnes to Biology Portal. N. H. Hennon, 3-7451.

Oak Ridge National Laboratory

ORNL Editor ..... Martha Goolsby
extension 3-6421



ANOTHER WISE OWL—James F. Thompson, a mechanical instrument maker in Plant and Equipment Division, is proud to be another wise owl. He was tightening an Allen head screw in a cutting tool being fastened to a boring bar when a piece of tool struck the left lens of Thompson's glasses and chipped the lens. He is the 26th member of the Division and the sixth member of the mechanical instrument maker-machinist group to become a member of the club. P&E Director Harry Seagren presents membership.

RECEIVES DIPLOMA—Lowell E. Brown, a welder in Plant and Equipment, proudly displays the diploma for a course in Industrial Metallurgy with a Quality Control of Metals option which he recently completed with the International Correspondence School. He completed the 3-year course six months early. Brown lives at Route 4 in Kingston.

There are more than 12,000 campgrounds and more than 450,000 campsites in the United States and Canada.

HOLIDAY HOURS

The ORNL Credit Union will be closed Thursday, Friday and Saturday, December 23-25 and Saturday, January 1. Please conduct all necessary business before or after these days. Happy holidays from the Credit Union personnel.

Easton Caps Toastmaster Contest in Humor Division

Dewey Easton, Metals and Ceramics Division, won the annual humorous speech contest of the Toastmasters District 63 Conference held in Nashville in November. A member of Fountain City Toastmasters Club, he topped speakers from six other areas within the district which contains 30 clubs.

Easton will compete in June against winners from eight other districts in the Southeast in competition in Greensboro, N. C.

6-15081

Oak Ridge Y-12 Plant

Y-12 Plant Editor ..... James A. Young
extension 3-7100

RECYCLED DOGHOUSE—James M. Schreyer, Chemistry Development, has the perfect answer to disposing of beer cans . . . just build a dog house. More than 5,000 beer cans went into the construction of the above house for Mr. Ben and Mr. Mack, Schreyer's prized St. Bernards. The dwelling is seven by eight feet, 10 feet tall, and contains cans from all 50 states, as well as Mexico, Germany and Nassau. Insulated to keep out the heat and cold, the house features no two cans alike side-by-side. Schreyer has also built outdoor tables and chairs from beer cans at his Burchfield Drive home.

Six Retire from Y-12 after Long Careers, As 17 More Will Retire Early January 1

Six Y-12ers plan retirement at the end of this month, and 17 more are taking early retirements. Joseph A. Jackson, SS Warehouse and Shipping; Claude F. Leatherwood, Graphite Shop; Corine McDaniel, Chemical Services; Willie J. Melton, Area Five Maintenance; Walter M. Redden, Electrical and Electronics; and Maxie L. Woodard, Fire Department, are leaving.

Joseph A. Jackson, a native of Clinton, came to Y-12 January 14, 1954. He lives at 104 Meadowbrook Street, Clinton.

He worked with Roane-Anderson and Management Services, here in Oak Ridge, and was with Magnet Mills in Clinton for many years before coming here. He and his wife, the former Edna Ruth Holt, have two children, Linda and Bryan.

Claude F. Leatherwood, born in Athens, lives there at Route 2. He came to Y-12 November 8, 1954. Prior to that he worked with the L & N Railroad, Stone and Webster, and was at ORGDP in 1945 and 1946.

Mrs. Leatherwood is the former Lucille Strickland, and they have a son, Tommy, and a daughter, Peggy Kelley.

Corine McDaniel, nee Pitts, came to Y-12 October 5, 1943. She was born in Ringgold, Ga., and lives at 495 West Outer Drive, Oak Ridge. She has a daughter, Bobbie Williams, in Wichita Falls, Tex.

Prior to coming to Y-12, she was with Standard Coosa Thatcher Co., Rossville, Ga.

William J. Melton was born in Bulls Gap. He worked on a farm, and was with the Frigidaire Corporation, Dayton, Ohio, before coming here February 23, 1955.

Jackson

Leatherwood

Mrs. McDaniels

Melton

Redden

Woodard

The Meltons live at 69 Hamilton Circle, Oak Ridge. Mrs. Melton is the former Helen L. Hurd. They have a daughter, Frances Solomon.

Walter M. Redden was born in Tempe, Ariz. He worked as an electrician for the Salt River Valley Water Users Assn. at Horse Mesa Dam, Roosevelt Ariz., and with the Baxic Magnesium Company, Henderson, Nev., before coming to Y-12 November 17, 1944.

He and Mrs. Redden live at 100 Victoria Road, Oak Ridge. She is the former Anna Walmsley. They have two daughters Ann Henry, and Betsy Diggs.

Maxie L. Woodard was born in Cedar Grove, Tenn., and lives at 113 Goucher Circle, Oak Ridge. He came to Y-12 October 3, 1950, after working with the Tennessee Valley Authority, and operating a service station of his own in Oak Ridge.

Mrs. Woodard is the former Rachel Garner, and they have a son, Kenneth, and a daughter, Freida Tate.

Early Retirements:

Retiring early are James A. Abston, Buildings, Grounds and Maintenance Services; James T. Berry, Chemical Services; Druery D. Blackburn, Research Services; Willie D. Braden, Cafeteria; James H. Campbell, Electrical and Electronics; James C. Cate, 9215 Rolling Mill; Clarence H. Crockett, Buildings, Grounds and Maintenance Services; Frank Darby, Electrical and Electronics; Clifford Herrell, A-2 Shops; Charles C. Hickey, General Shop Job Liaison; William C. Hudson, Engineering Division; Samuel L. Newton, Machine Maintenance; Leroy V. Thornton, Alpha Five Processing; Nelson Tibbatts, Building Services; Mabry Williford Dimensional Inspection; Dovie R. Searcy, Beta Two Chemistry; and William B. Daugherty, Area Five Maintenance.

WANTED Rides Car Pools

Ride wanted from West Clinch Avenue, Knoxville, to East Portal, straight day. D. W. Williams,, plant phone 3-5981, home phone Knoxville 546-8276.

Ride wanted from Robertsville-Illinois junction, Oak Ridge, to Bear Creek Portal, E Shift. B. L. Jenkins, plant phone 3-7774.

Two car pool members wanted from Fountain City, Smithwood area, Knoxville, to any portal, straight day. Wayne Collette, plant phone 3-7394, home phone Knoxville 687-0386.

Riders wanted from Washington Pike, Whittle Springs section, Knoxville, via Clinton Highway, to East, North or Central Portals, straight day. J. F. Baker, plant phone 3-5935, home phone Knoxville 523-4542.

Machine Shops' Gallups Rites Held in Oak Ridge

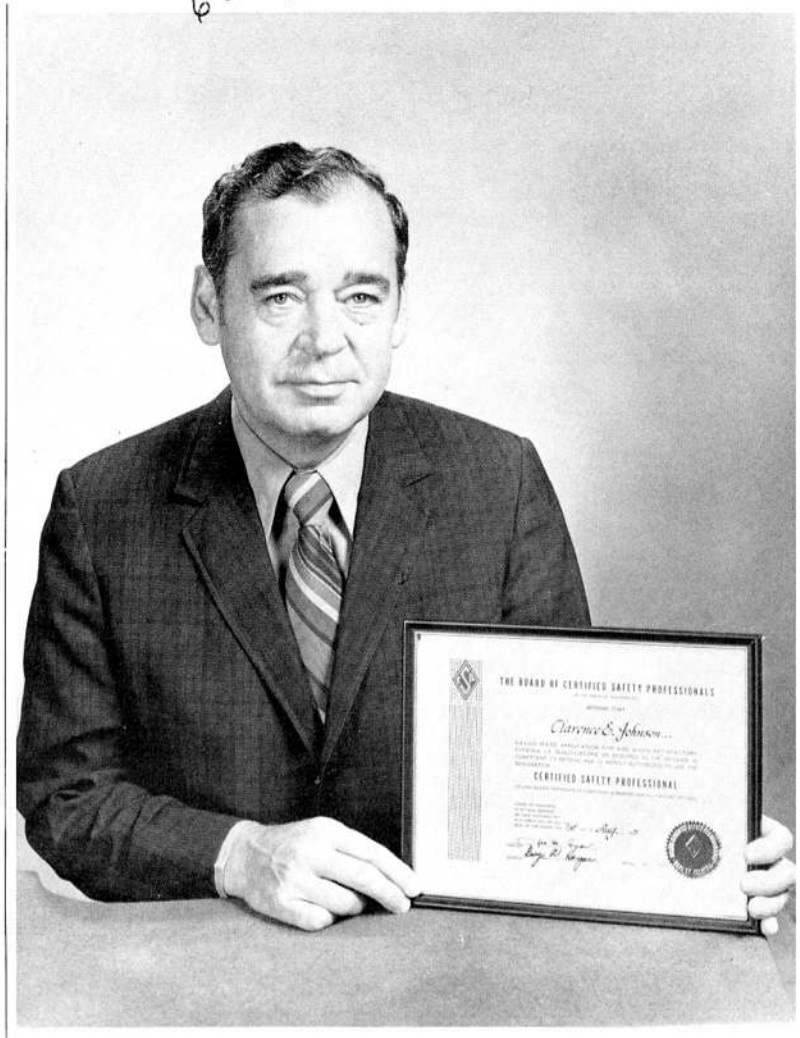
Herman H. Gallups, 9766 Machine Shop, died November 18, in a Knoxville hospital.

A native of Hayden, Ala., Mr. Gallups came with Union Carbide February 1, 1954, after working in Birmingham. He served in the U. S. Merchant Marines during World War II.

Mr. Gallups

Survivors include his wife, Mrs. Pauline Moon Gallups, at 125 E. Arrowwood Road, Oak Ridge; and a son, David, also of Oak Ridge; sisters, Mrs. Ola Starnes, Leeds, Ala.; and Mrs. Nancy Langston, Avondale, Ala.; brothers, Tom, Los Angeles, Calif., and Elijah, Hayden, Ala.

Funeral services were held at the Weatherford Chapel, Oak Ridge, with burial in Anderson Memorial Gardens.



CERTIFIED PROFESSIONAL—Clarence E. Johnson, head of Y-12's Safety Department, has been notified that he is a Certified Safety Professional, that individual "who utilizes the expertise derived from a knowledge of the various sciences and professional experience to create or develop procedures, processes, standards, specifications and systems to achieve an optimal control or reduction of the hazards and exposures which are detrimental to people and/or property by the utilization of analysis, synthesis, investigation, evaluation, research, planning design and consultation." The certificate is issued by the Board of Certified Safety Professionals of the Americas, Inc.

Alloy Treatment Subject For C. R. Schmitt Paper

Tests in Y-12 have shown that when a magnesium treatment is applied to the copper-zinc alloy, brass, the brass becomes less vulnerable to corrosion in both demineralized and sea water.

Schmitt

Development engineer C. R. Schmitt described the tests in a meeting of the Tennessee Academy of Science at Middle Tennessee State University in Murfreesboro, November 19-20.

The studies, according to Schmitt, indicate that by pretreating brass at 160° Fahrenheit with demineralized water to which 10-20 parts per million magnesium has been added, the corrosion of the alloy will be retarded in subsequent water exposure tests.

The tests were performed in Y-12 in support of U. S. Atomic Energy Commission programs.

Katie Cole Entertains Friends at Thanksgiving

Katie Cole, Building Services, chose a unique way to honor her friends during the Thanksgiving holidays. On Thursday, November 18, she reserved space in the Cafeteria and asked old-time friends to have Thanksgiving dinner with her. (She retires early in 1972.)

Attending the dinner were Lou Billingsley, Bessie Lewis, Jackie Holloway, Mary Ann Henline, Marguerite Cleveland, Rella Davis, Jimmie Taylor, William Hazelwood, Arthur Madison, Robert Ruffin, Jack Marble, Miles Dansby, Tom Kimbrough, Roger Cox, Archer Tucker and Earl Letsinger.

SAFETY SCOREBOARD

The Y-12 Plant Has Operated
54 Days Or
1,959,000 Man-Hours
(Unofficial Estimate)
Through December 12
Without A Disabling Injury
SAFETY AT HOME, AT WORK, AT PLAY

J. C. Thompson Will Stress Y-12 Plant Capabilities

The "Y-12 Plant Fabrication Capabilities" will be discussed at the Tennessee Section of the American Welding Society meeting in Nashville, December 21.

James C. Thompson, Jr., supervisor of Mechanical Inspection in the Technical Division, will describe the variety of manufacturing tools used at the plant and list some of the unique fabrication tasks the plant has performed to support programs of the U. S. Atomic Energy Commission and other federal agencies.

NEW ELEMENTS

Since the Atomic Energy Commission was established in 1946, its laboratories have discovered 10 new elements. The most recent was element 105, called hahnium.

Treating Mild Hypertension

By T. A. LINCOLN, M.D.

Almost 23,000,000 Americans have hypertension. The consequences of this disease are almost staggering. It is certainly a major factor in predisposing millions to coronary heart attacks, which kill 500,000 each year. It is a leading cause of stroke, which destroys over 200,00 a year and leaves many more permanently disabled. It causes heart failure and predisposes to obstructive vascular disease in the extremities. In spite of these dire consequences, many people and a few physicians are remarkably unconcerned about this dangerous malady.

Dr. Lincoln

Those patients who have symptoms such as headaches, dizziness, and shortness of breath seek medical care and usually follow their physicians' treatment fairly well. Unfortunately, many quit taking their medicine as soon as they feel better. They usually get back under their physicians' care when their symptoms return, but it is tragic how many other people do not know they are hypertensive, or know it but do nothing about it.

The need for treatment of moderate or severe hypertension is generally appreciated, but the need to treat mild hypertension and the effectiveness of such treatment, if it is diligently followed, have only become clear in the past several years.

Treatment Studies

The studies on the value of treatment of mild hypertension, conducted in the Veterans' Administration under the direction of Dr. Edward D. Freis, won for him the 1971 Albert Lasker Clinical Research Award.

Before describing Dr. Freis' study, it is necessary to define hypertension. The 1959 Princeton Conference on Hypertension agreed on the following definitions:

1. Normotension; blood pressure has **always** been below 140 mm mercury systolic and 90 mm mercury diastolic (140/90).

2. Borderline hypertension; systolic pressures have ranged between 140 and 159 and the diastolic pressures between 90 to 94 or both on one or more occasions.

3. Clinical hypertension; patient has relatively sustained systolic pressures of 160 or over and/or diastolic pressures of 95 or over.

Another group has been added by Dr. Caroline Thomas at Johns Hopkins which she calls "transitory hypertension." These people have had pressure levels which reached 160 systolic or above, or 95 diastolic or above on one or more occasions, but at other times were found to be borderline or normal.

Random Patients

Dr. Freis' group followed 523 men with a median age of 49, who had an average diastolic pressure of 90 through 129 mm mercury. To assure an adequate study, a preliminary investigation was conducted to find uncooperative patients and ones likely to drop out. They were given placebo pills with a marker substance, and pills were counted at each visit. Only those patients who attended the clinic regularly and took 90 percent of the prescribed tablets were admitted to the final study.

Those patients who were dependable were then assigned randomly in a double blind fashion to either a treatment or placebo group. The treatment used was hydrochlorothiazide plus reserpine plus hydralazine. After 20 months, the incidence of major complications, such as heart failure, heart attacks, or strokes, was so high in the placebo group who had diastolic pressures between 115 and 129, they were removed from the study. The remaining 380 patients with diastolic pressures between 90 and 114 and considered mildly hypertensive were left in the study for an average of 3.3 years and some for over 5 years.

Early Diagnosis Possible

Nineteen deaths caused by cardiovascular disease occurred among the 194 placebo patients, but only eight in the treatment group. The most frequent cause of death was coronary heart disease. When non-fatal complications were included, the risk for both fatal and non-fatal episodes was 55 percent in the placebo group and 18 percent in the treatment group.

Dr. Thomas' long-range studies of the eventual development of hypertension in medical students after they graduate, indicate that candidates for later hypertension can often be identified early in life. Frequent blood pressure measurements, especially in those who had a strong family history of hypertension were necessary. Many had blood pressures in school which varied around normal to borderline, but then for unknown reasons had their pressures driven into an upward spiral after the age of 40.

The urgent lesson is that hypertension should be identified as early as possible. Treatment of even mild cases is definitely indicated and is valuable. Patients must recognize that hypertension is a lifelong disease and must be followed by regular visits to a physician for measurement of the pressure and adjustment of medicine. Remissions occur but patients must continue to be followed in case the pressure starts to rise again.

High blood pressure must be carefully and persistently treated throughout the lifetime of the victim. If it is, the prognosis, especially in mild cases, is reasonably good and may reflect only a modest decrease in life expectancy.

SPORTS NOTES

ALL-CARBIDE

A new fishing contest is slated to begin on January 1. The new program provides for more family participation and will be uniform among the three installations.

Two Carbide fishing rodeos will be held in 1972, the first half from January 1-June 30 and the second half from July 1 - December 31. There are 11 eligible species, smallmouth bass, largemouth bass, striped bass, walleye, sauger, crappie, bream, trout, hybrid or rock fish, muskie or rough fish.

To compete, a contestant must be a Carbide employee, retiree, or a member of an employee's immediate family (wife, son or daughter), residing with and dependent upon him for support.

Fish entered in this contest must be taken on rod or cane pole and line. Fish entered must be caught in Tennessee waters open to public or within 150 miles of Oak Ridge. Weight will determine winners. In case of ties, length and girth, in that order, will be secondary in determining the winner.

Entry forms must be properly completed and witnessed by the dock operator in the vicinity or an establishment with certified scales. Pictures are not required.

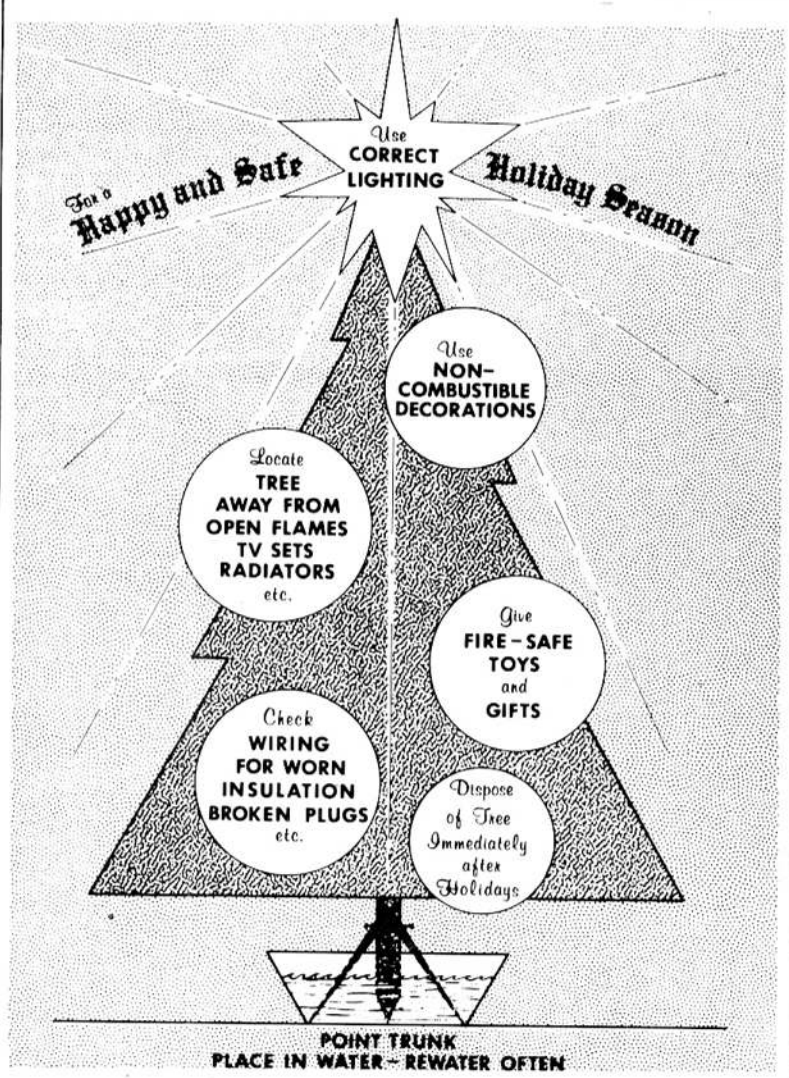
Entry blanks are available in containers at the Portals, the safeteria and Recreation Office. For more information on the awarding of prizes see the recreation bulletins on official bulletin boards.

No entry fee is required, so enter all your best catches.

Informal badminton play will begin on Thursday, January 6 at the old Jefferson Junior High gym. Employees and their families are welcome to participate each Thursday night from 7-9 p.m. Wear your tennis shoes and come on over.

In the fall competition of the All-Carbide Smallbore Rifle Indoor League, winners were F. M. Barnes, first scratch with 294.778; H. A. Harrel, first handicap with 290.467; R. J. Spurling, second scratch with 292.250; D. M. Hewett, second handicap with 287.839; J. L. Huff, third scratch with a 290.556; and A. A. Abbatiello, third handicap with a 287.649. High individual match honors went to J. L. Huff with a 299.

In the Carbide Family Mixed League on December 3, the Upsets took high team series with handicap with a 2,365. Rolling high individual games scratch were Paul Bennett of Upsets with a 219 and Georgia Guinn of Upsets with a 204. High series with handicap went to Paul Bennett with a 655 and Margie Adair of Magic Makers with a 598.



ORNL BOWLING

In A League December 6 play the Cellar Dwellers, ORAU and Eagle Eyes are in a close race for first. Weekly prizes went to Pour-It-Ons with a 2,981, John Shugart of Pee Wees with a 665 high series with handicap, H. L. Gerth of Late Comers with a 268 high game with handicap and Frank Davis of Ten Pins with a 221 high game scratch.

In C League the Damagers are out in front following December 1 competition. Honors went to the Damagers with a 2,977, Laughlin of Remkeys with a 678 high series with handicap, Burch of Remkeys with a 294 high game with handicap. Burch scored a sizzling 278 scratch game, 101 pins over his season average. The game will make him eligible for an ABC Century Award.

Woodchoppers led E League play on November 30. Honors went to the Mets with a 2,882, Pawel of Woodchoppers with a 636 high series with handicap, Craig of Mets with a 255 high game with handicap and to Coghlan of Woodchoppers with a 207 high scratch game.

Mousechasers of ORNL Ladies League were out front after December 1 play. Honors went to Sandra Beidel of Pick-Ups with a 179 high game scratch, Georgia Guinn of Mousechasers with a 488 scratch series and Betty Burch with a 642 high series with handicap.

ORGDP BOWLING

In the Women's League the Up-Towners held a half point lead in November 30 standings. Bowler of the week honors went to Marilyn Canterbury with scratch scores of 171-177-170 for a 518 and a handicap series of 626. Oleta Carden rolled the high scratch game of 181. Up-Towners took the high team handicap series with a 2,261.

The Wednesday 5:45 League has the Planners out front after December 1 play. Honors went to Burton and Duff for 259 high handicap games and Bradley for a 659 high handicap series, Pirates for high team series of 3,035.

Y-12 BOWLING

Classic League Bowlers see the Eightballs edging out front of league play, closely followed by old enemies, Bumpers and Splinters.

Clyde Craven, Bumpers, recently rolled a 267 game . . . and Bill Ladd, Eightballs, rolled a 686 series . . . both scratch counting!

Mixed League bowlers are giving the first half of league play to either the Alley Cats or the Rollers, who face each other this week in final play. The Cats have a one-point edge in tight action.

C Leaguers feature the Sunflowers out front, with the Big Five and Badgers licking their heels close behind.

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Industrial Cooperation Utilizes Expertise

(Continued from Page 2)

deavor, though not considered spin-off, is the product or process which a researcher might develop to aid his research or data assessment. One such industry just being formed in Oak Ridge is Elographics, which makes the Elograph, which might be considered an unplotter. It provides accurate coordinate values in analog form for input to X-Y plotters, X-Y work tables or other analog devices. The Elograph was developed by ORNL health physicist Sam Hurst while he was a professor at the University of Kentucky. The company, aided by six Union Carbide staff members and their family members, is still a basement, spare-time operation but there is a demand for the product. Possibly the first area of large application will be the medical industry for assessment of charts like the electrocardiogram.

It is impossible to tell in detail of the 15 spin-off industries in Oak Ridge. The largest of these, however, provides insight into the contribution which such an industry can make both to the community and to the field of technology. ORTEC was conceived in the mid-fifties by ORNL users of electronic equipment (solid-state radiation detectors), who, although they did not know how to make the equipment themselves, recognized its potential. The company, now employing more than 360 people and still expanding, designs, develops and manufactures sophisticated electronic equipment for marketing all over the world.

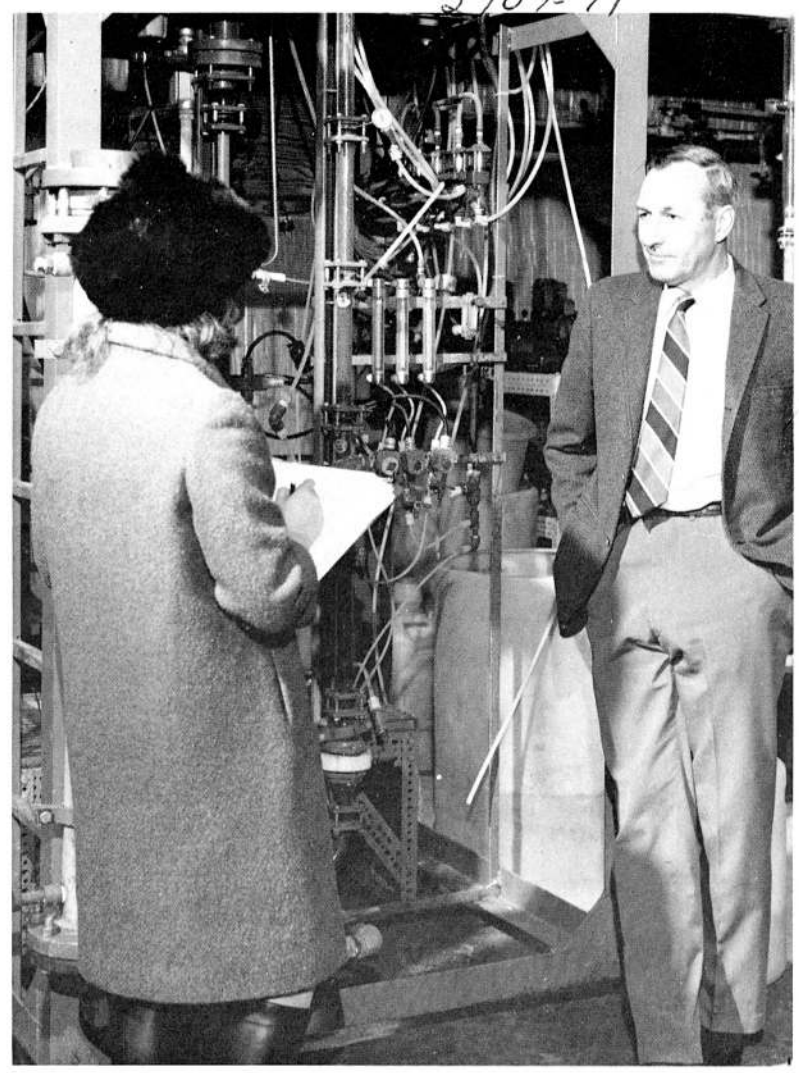
The first industry exploiting available laboratory technology to be started by someone outside the Oak Ridge research community has begun marketing an electron spectrometer. H. M. Bedell, president of Oak Ridge Analytical Laboratories, has marketed a spectrometer modeled after one designed and built by Thomas Carlson and Manfred Krause of ORNL's Physics Division. The spectrometer has opened up new research potential in the fields of analytical chemistry.

Another company, National Research Corporation, a subsidiary of Cabot Corporation, both of which are headed by former Union Carbide staff members, has expressed interest in bringing its efforts to Oak Ridge to aid spin-off industry. NRC would provide laboratory, pilot plant, marketing analysis, legal, and financial services in return for an interest in the development.

'Spin-Offs' Noted

Two significant research tools, recently developed by Union Carbide researchers, have begun to be produced by industry. The GeMSAEC, an instrument which increases the rate, precision and accuracy of performing clinical and biochemical analyses, was developed for use in the ORNL Molecular Anatomy Program. The UV Analyzer, originally developed for the Body Fluids Analysis Program, has since been adapted for other uses such as sewerage effluent analysis. Both of these received Industrial Research's "IR-100" award as significant research advances.

In any large research and development operation such as that of the Nuclear Division, many new developments and results of scientific research will evolve for which there are possible industrial uses. In aiming to make the maximum use of such developments, the industrial cooperation program depends on the employee for suggestions and assistance in learning of these developments. If you have an idea which you think would be useful in industry, contact your local IC representative or the Industrial Cooperation Coordinator.



CHEMICAL SEPARATIONS RIG — Irwin Higgins, v-p and technical director, stands by one of the column configurations for the ion exchange process. Higgins, former ORNL staff member, develops and builds equipment for purifying water, air, fertilizer, etc., by removing acid and inorganic contaminants with the ion exchange process.

Social Security Increase Set As New Year Present

Your social security tax will increase slightly in the new year. Effective January 1, employees will pay on $9,000 of income, rather than on $7,800 as they are paying this year.

The rate (5.2 percent) is the same . . . the total FICA tax increasing from $405.60 to $468. By law, Union Carbide Corporation matches the amount paid by each employee..

Oak Ridge Toastmasters Name Officers for 1972

Several Nuclear Division men have been elected officers in the Oak Ridge Chapter of the Toastmasters Club.

Named president for 1972 was Nat Schulman, Y-12; while Harry Raley, Y-12, was elected sergeant-at-arms; Ron Gray, ORGDP, was elected administrative vice-president; and Don Keith, also from ORGDP, was named treasurer.

The club meets every Monday at 5:45 p.m. at the Alexander Motor Inn for a dinner meeting. New members are needed and educational opportunities and leadership qualities will be stressed in the coming year.

Interested persons may attend a meeting as guests of the club. Public speaking in many forms is emphasized.

'Atomic Pioneers' Second in Series

The second in a series of four biographical booklets describing the contributions of men and women to atomic science over a 2,500-year period has been published by the Atomic Energy Commission's Division of Technical Information Extension.

"Atomic Pioneers," Book 2, covers the period from the mid-19th to the early 20th century and is part of the AEC's "World of the Atom" series which was designed for junior high school students to supplement the limited amount of nuclear energy information materials now available at the junior high level.

The illustrated publication, written by Ral Hiebert and his wife, Roselyn, authors of several children's books, gives a brief account of the lives and work of 26 contributors to the development of nuclear science including such notables as Pierre and Marie Curie, Wilhelm Roentgen, and Dimitri Mendeleev, the Russian chemist who devised the first periodic Table of Elements in the order of their atomic weight.

The first book of "Atomic Pioneers" was published in October, 1970, and summarizes the works of important scientists from ancient Greece to the mid-19th century.

Single copies of the publication series are available without charge from the AEC, Post Office Box 62, Oak Ridge, Tenn. 37830.

Affirmative Action

(Continued from Page 1)

that "now is not the time to rest on our laurels."

Hibbs told the Division representatives that they had a key role in the future success of the affirmative action program. In addition to minority employees, emphasis must be placed on employment of women, particularly in professional and supervisory jobs, he explained. Women constitute 30 percent of the nation's work force.

The following is a list of the Affirmative Action Representatives for each of the Nuclear Division facilities:

OAK RIDGE GASEOUS DIFFUSION PLANT

Joyce B. Ferguson, Laboratory; Frank E. Gethers, Separation Systems; William C. Hartman, Shift Operations and Security; Robert L. Higgins, Development; Benjamin W. McLaughlin, Fabrication and Maintenance; Leroy O'Hara, Jr., Operations; Domenic S. Pesce, Engineering; W. Eugene Rooks, Fabrication and Maintenance; and Luther B. True, Finance and Materials.

OAK RIDGE NATIONAL LABORATORY

George M. Adamson, Metals and Ceramics; Dave Allison, Biology; Stanley I. Auerbach, Ecological Sciences; Edward G. Bohlmann, Reactor Chemistry; Robert E. Canning, MAN Program; Margaret M. Clarke, Civil Defense Project; John W. Cleland, Solid State; William B. Cottrell, Reactor; Jackson B. Davidson, Instrumentation and Controls; Herbert G. Duggan, General Engineering; Richard P. Jernigan, Jr., Thermonuclear; Gerald F. R. Johnson, Plant and Equipment; Eugene Lamb, Isotopes; Thomas A. Lincoln, Health; Carl A. Ludemann, Physics; Fred C. Maienschein, Neutron Physics; John P. McBride, Chemical Technology; Richard D. McCulloch, Mathematics; James R. McGuffey, Inspection Engineering Group; Claire Nader, ORNL-NSF Environmental Program; Earl J. Nash, Personnel; Larry P. Riordan, Laboratory Protection; Brena Stevens, Information; Ellison H. Taylor, Chemistry; Arthur D. Warden, Jr., Health Physics; James C. White, Analytical Chemistry; and Edward J. Witkowski, Operations.

PADUCAH GASEOUS DIFFUSION PLANT

John L. Clark, Operations; Art K. Edwards, Industrial Relations; Charles A. Fritts, Finance and Materials; Robert W. Levin, Laboratory; Robroy Millican, Maintenance and John K. Phipps, Engineering.

OAK RIDGE Y-12 PLANT

William G. Butturini, Production Engineering and Scheduling; LeVaughn Davis, Materials and Services; J. Robert DeMonbrun, Shift Superintendents Edward F. Gambill, Technical; V. C. Jackson, Inspection; David A. Jennings, Maintenance; James M. Seivers, Industrial Relations; William E. Tewes, Development; Fran V. Tilson, Fabrication; J. Leo Waters, Engineering; Robert A. Williamson, Metal Preparation; and Leander E. Woods, Jr., Assembly.

GENERAL STAFF REPRESENTATIVES

Harry J. Brown, General Accounting; Mildred M. Clark, Auditing; Harvey I. Cobert, General Industrial Relations; Bobbye W. Curtis, Purchasing; James A. Gillcrist, Computing Technology; Lowell L. McCauley, AECOP; and Edward C. McFaddin, Law.

Calendar

COMMUNITY

December 18, 19

Oak Ridge Civic Ballet Association presents "The Nutcracker" with guest artists Douglas Bentz and Theresa Shatlien. Oak Ridge High School Auditorium, Dec. 18 at 8:15 p.m.; Dec. 19, 2:15 p.m. Admission: Adults $2.50, students over 12 $1.25, under 12, $.75.

December 19

Art Center Film Club presents "Modern Times," Charles Chaplin USA 1936. Jefferson Junior High Little Theatre, 8 p.m. Admission: Adults $1.50, students $1.

TECHNICAL

December 17

Health Physics Seminar: "The Rotational and Vibrational Excitation of Polar Molecules by Electron Collisions." Y. Itikawa, Argonne National Laboratory. East Auditorium, 4500N, 10 a.m.

January 6

Gas Cooled Reactor and Thorium Utilization Program Information Meeting. East Auditorium, 4500N, 9 a.m.